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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,992	09/11/2003	Morten Brok Gentsch	112740-868	9337

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EXAMINER	
DEAN, RAYMOND S	
ART UNIT	PAPER NUMBER
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,992	GENTSCH ET AL.	
	Examiner	Art Unit	
	Raymond S. Dean	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 5, 2007 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Damgaard further teaches parts for measuring the first voltage during the at least one time window (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25, the power level is known thus the voltage level is known, P=VI, the measurement for the comparison will take place during a particular time period which comprises a time window). 3GPP further teaches time masking parts selecting a time window (See Annex B, Figure B2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 – 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Damgaard et al. (US 6,670,849) in view of 3GPP TS 45.005 v5.2.0, hereafter 3GPP.

Regarding Claim 1, Damgaard teaches a power control system for a radio transmitter transmitting a radio signal modulated with non-constant envelope modulation, comprising: an amplifier that amplifies a signal comprising data bursts (Figures 1, 2, Columns: 1 lines 48 – 57, 2 line 37, lines 49 – 60, 3 lines 61 – 66, 5 lines 38 – 41); parts for obtaining a first voltage corresponding to a power of the amplified signal (Column 5 lines 38 – 41, P=VI thus the voltage V is known if the power P is known); parts for measuring the first voltage during at least one time window (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25, the power level is known thus the voltage level is known P=VI, the measurement for the comparison will take place during a particular time period which comprises a time window); a comparator for comparing the first voltage with a reference voltage and producing a comparison result (Figure 2, Column 7 lines 20 – 25); and a controller, responsive to the comparator that adjusts a control signal of the amplifier after a predetermined time delay, occurring after the time window has lapsed, if the comparison result indicates that the first voltage

deviates more than a predefined threshold value from the reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since the EDGE system is a burst system the power of the transmitter will be adjusted for the purpose of transmitting bursts, in order for the power of the transmitter to be adjusted for the bursts there will be an adjustment of the power for the next burst during a time period in between the time window for the previous burst and the time window for said next burst, the time period in between the two time windows comprises a time delay occurring after the first time window has lapsed).

Damgaard does not teach time masking parts, that select at least one time window located at a point where tail symbols of a first data burst are sent, wherein said time window has a predetermined length, and wherein the non-constant-envelope modulation is made more constant.

3GPP teaches time masking parts, that select at least one time window located at a point where tail symbols of a first data burst are sent (See Annex B, Figure B2), wherein said time window has a predetermined length (See Annex B, Figure B2), and wherein the non-constant-envelope modulation is made more constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the GSM-EDGE system of Damgaard with the time mask circuitry of 3GPP for the purpose of enabling said system to meet the requirements of the pan-European digital cellular telecommunications systems, which is GSM based.

Regarding Claim 11, Damgaard teaches a method for power control in a radio transmitter transmitting a radio signal modulated with non-constant envelope modulation, the method comprising the steps of: amplifying a signal to result in an amplified signal, the amplified signal including data bursts (Figures 1, 2, Columns: 1 lines 48 – 57, 2 line 37, lines 49 – 60, 3 lines 61 – 66, 5 lines 38 – 41); obtaining a first voltage which corresponds to an output power of the amplified signal (Column 5 lines 38 – 41, P=VI thus the voltage V is known if the power P is known); measuring the first voltage, in at least one time window with the predefined length, of the first data burst to be used for a comparison (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25, the power level is known thus the voltage level is known P=VI, the measurement for the comparison will take place during a particular time period which comprises a time window); comparing the first voltage with a reference voltage and producing a comparison result (Figure 2, Column 7 lines 20 – 25); and adjusting a control signal used in the amplifying step after a predetermined time delay, occurring after the time window has lapsed, if the comparison result indicates that the first voltage deviates more than a predefined voltage value from the reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since the EDGE system is a burst system the power of the transmitter will be adjusted for the purpose of transmitting bursts, in order for the power of the transmitter to be adjusted for the bursts there will be an adjustment of the power for the next burst during a time period in between the time window for the previous burst and the time window for said next burst, the time period in

between the two time windows comprises a time delay occurring after the first time window has lapsed).

Damgaard does not teach performing time masking to select at least one time window having a predetermined length and being located at a point where tail symbols of a first data burst are to be sent, wherein the non-constant-envelope modulation is made more constant.

3GPP teaches performing time masking to select at least one time window having a predetermined length and being located at a point where tail symbols of a first data burst are to be sent (See Annex B, Figure B2), wherein the non-constant-envelope modulation is made more constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the GSM-EDGE system of Damgaard with the time mask circuitry of 3GPP for the purpose of enabling said system to meet the requirements of the pan-European digital cellular telecommunications systems, which is GSM based.

Regarding Claim 2, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 1. 3GPP further teaches wherein the time masking parts select a time window located at an edge of an active burst (Annex B, Figure B2).

Regarding Claims 3, 13, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 2,12. Damgaard further teaches wherein the edge is in one

of a ramp up position and a ramp down position of the active burst (Column 1 lines 48 – 57).

Regarding Claims 4, 14, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. Damgaard further teaches wherein the predetermined time delay corresponds to a delay between a moment in time at which a value of the control signal is obtained and a time at which a subsequent data burst begins (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since this is a burst system there will be times when the control element adjusts the error signal before the transmission of a subsequent burst).

Regarding Claims 5, 15, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 4, 14. Damgaard further teaches wherein the subsequent data burst is a next data burst to the first data burst for which the first voltage was measured (Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since this is a burst system there will subsequent bursts).

Regarding Claims 6, 16, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 4, 11. 3GPP further teaches wherein the predefined length of the at least one timing window is approximately 4 microseconds (Page 78, Figure B.2, the 3GPP specification defines the 2+2 microseconds period, which is 4 microseconds).

Regarding Claims 7, 17, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. 3GPP further teaches wherein the predefined length

of the at least one timing window is variable (Page 78, Figure B.2, Page 79, Figure B.3, the window is variable normal bursts and access bursts).

Regarding Claim 8, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 1. Damgaard further teaches wherein at least one of the time masking parts and the controller are at least partially implemented using software code run in a processor (Column 4 lines 3 – 10).

Regarding Claims 9, 19, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. Damgaard further teaches wherein the power control system is implemented in a mobile terminal (Column 3 lines 61 – 66).

Regarding Claims 10, 20, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claims 1, 11. Damgaard further teaches wherein the power control system is implemented in a base station terminal (Column 3 lines 61 – 66, typical base stations use non-linear amplifiers).

Regarding Claim 12, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 11. 3GPP further teaches wherein the step of selecting is adapted to select a time window located at an edge of an active data burst (Annex B, Figure B2).

Regarding Claim 18, Damgaard in view of 3GPP teaches all of the claimed limitations recited in Claim 11. Damgaard further teaches wherein at least one of the step of comparing and the step of controlling is at least partially implemented using software code (Column 4 lines 3 – 10).

Regarding Claim 21, Damgaard teaches a method for power control in a radio transmitter transmitting a radio signal modulated with non-constant envelope modulation, the method comprising the steps of: measuring a first voltage corresponding to the output power of a signal in at least one time window (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 25, the power level is known thus the voltage level is known P=VI, the measurement for the comparison will take place during a particular time period which comprises a time window); comparing the first voltage with a reference voltage and producing a comparison result (Figure 2, Column 7 lines 20 – 25); and adjusting a control signal used in an amplifying step after a predetermined time delay, occurring after the time window has lapsed, if the comparison result indicates that the first voltage deviates more than a predefined voltage value from the reference voltage (Figure 2, Columns: 1 lines 48 – 57, 3 lines 61 – 66, 7 lines 20 – 45, since the EDGE system is a burst system the power of the transmitter will be adjusted for the purpose of transmitting bursts, in order for the power of the transmitter to be adjusted for the bursts there will be an adjustment of the power for the next burst during a time period in between the time window for the previous burst and the time window for said next burst, the time period in between the two time windows comprises a time delay occurring after the first time window has lapsed).

Damgaard does not teach performing time masking on a signal having data bursts to select at least one time window having a predetermined length and being located where tail symbols of a first data burst are to be sent, wherein the non-constant-envelope modulation is made more constant.

3GPP teaches performing time masking on a signal having data bursts to select at least one time window having a predetermined length and being located where tail symbols of a first data burst are to be sent (See Annex B, Figure B2), wherein the non-constant-envelope modulation is made more constant (See Annex B, Figure B2, the use of the two windows enables the 8PSK modulation, which is a non-constant-envelope modulation, to be more constant).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the GSM-EDGE system of Damgaard with the time mask circuitry of 3GPP for the purpose of enabling said system to meet the requirements of the pan-European digital cellular telecommunications systems, which is GSM based.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Raymond S. Dean
March 19, 2007